BY ORDER OF THE COMMANDER
AIR FORCE SPACE COMMAND

341 SPACE WING INSTRUCTION 32-1001

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Civil Engineering

SNOW AND ICE CONTROL

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction establishes priorities, responsibilities, and procedures for snow and ice control on base and in the missile field. This instruction implements higher headquarters Air Force Policy Directive (AFPD) 32-90, *Real Property Management,* and Air Force Instruction (AFI) 32-1002, *Snow and Ice Control*. It applies to all units assigned to the 341st Space Wing, and units assigned or attached to, or supported by Malmstrom AFB. For a list of abbreviations and acronyms see **Attachment 1**.

SUMMARY OF REVISIONS

This is the third publication of MAFBI 32-1001. This revision denotes numerous priority changes and facility changes for the 40th Helicopter flight.

Chapter 1

METHOD OF OPERATION

1.1. Conditions for Execution. This instruction is effective for planning and implementation when weather conditions so dictate.

1.2. Operations to be Conducted. When snow or ice impede or create hazardous conditions for aircraft or vehicular movement, necessary measures will be taken to remove or reduce the snow and/or ice from the affected areas.

1.3. Key Assumptions. For this instruction to be effective, adequate equipment and manning must be available to include seasonal over-hires.

1.4. Operational Constraints. Operations may be constrained by lack of over-hires and equipment down for repair.

1.5. Operations Security (OPSEC):

1.5.1. All actions directed by this instruction will take into consideration OPSEC in order to prevent enemy exploitation of information to gain an advantage. Realistic OPSEC requires conscientious security discipline at all levels of command and staff. Public affairs, deception, and operational requirements must be in agreement with the critical information. Review all attachments to ensure they comply with the desired degree of security. Consider the content of the instruction and resulting actions in execution.

1.5.2. Instruction must provide the highest degree of security without degrading effectiveness. Known or suspected enemy awareness from previous operations and plans should be considered in determining OPSEC requirements. Procedures are then designed to eliminate suspect sources as feasible, including such possible sources as job control communications.

1.6. Command Relationships. Established command relationships will remain in effect during the execution of this instruction.

1.7. Logistics Appraisal. This Instruction is logistically feasible within the assumptions and constraints specified.

1.8. Personnel Appraisal. This plan is feasible within the assumptions and constraints specified.

Chapter 2

TASKED ORGANIZATIONS

2.1. General Situation:

2.1.1. Priorities. A detailed listing of priorities will be established and approved by the S&IC Committee in September of each year. See **Chapter 4**.

2.1.2. S&IC Instruction. The 341st Support Group Commander will be responsible for preparation of, or updating of, an S&IC Instruction. Snow and ice must not be permitted to accumulate in aircraft traffic areas to the extent it interferes with the base primary mission. The provisions of AFI 38-203*, Commercial Activities Program*, will apply in determining the manpower resources to be utilized for S&IC/removal.

2.1.2.1. Experience has shown a successful snow and ice instruction largely depends upon the techniques employed, numbers and types of equipment provided, and availability of trained personnel to perform this task. As a general rule, equipment should be provided in numbers and types sufficient to cope with the weather conditions that may be encountered. (See Table of Allowance 010 for S&IC vehicle allowances.)

2.1.2.2. The S&IC Instruction incorporates the knowledge and experience gained from "freak" storms.

2.1.2.3. As a minimum, a copy of this instruction including priorities for clearing will be furnished to the members of the S&IC Committee, and others concerned, as specified by the committee chairperson.

2.1.3. S&IC Committee. The committee will convene and be chaired by the 341st Space Wing Commander. The committee composition is:

2.1.3.1. 341st Support Group Commander.

2.1.3.2. Base Civil Engineer.

2.1.3.3. BCE Chief of Operations.

2.1.3.4. BCE Heavy Repair Superintendent.

2.1.3.5. 40th Helicopter Flight.

2.1.3.6. 341st Logistics Group Commander.

2.1.3.7. 341st Operations Group Deputy Commander.

2.1.3.8. 341st Transportation Squadron Commander.

2.1.3.9. Weather Flight Commander.

2.1.3.10. 341st Services Squadron Commander.

2.1.3.11. Chief of Safety.

2.1.3.12. 341st Communication Squadron Commander.

2.1.3.13. Representatives of major tenant organizations.

2.1.3.14. Additional members may be added at the discretion of the chairperson to provide representation from other sections of the installation as may be necessary.

2.1.3.15. The chairperson will convene two mandatory general committee meetings each year. One meeting will convene no later than the last week in May and the other no later than the last week in September.

2.1.4. During the meetings, the members will ensure they:

2.1.4.1. Outline organization responsibilities and jurisdiction of all personnel involved.

2.1.4.2. Establish priorities.

2.1.4.3. Review problems encountered in previous season.

2.1.4.4. Review contract requirement for support of emergency snow and ice removal.

2.1.4.5. Review proposed summer rebuild program. Establish follow-up procedures to ensure equipment will be in service by 1 September.

2.1.4.6. Review status of operator maintenance and availability of spare parts (September meeting).

2.1.4.7. Thoroughly review the Base S&IC Instruction and all applicable procedures and directives which support the base snow removal effort. Recommend changes as appropriate (May meeting).

2.1.4.8. Review annual depot repair requirements (RCS: LOG-LGTM)(7312). Ensure snow removal equipment requiring major rebuild has been scheduled.

2.1.4.9. Review the minimum width and maximum permissible snow depth in the clear zones.

2.1.4.10. Review minimum cleared width and maximum time limits required to meet Emergency War Operations (EWO) capability.

2.1.5. To facilitate snow removal in parking lots, the committee must:

2.1.5.1. Select and allot priority clearance to the largest lots adjacent to the main work areas.

2.1.5.2. Consider temporary mass vehicle parking on athletic fields, unused portions of the airfield, paved or grass areas, etc. These emergency parking areas must be cleared and prepared prior to arrival of new shift. Parking must be controlled. Buses are used to transport personnel to and from required buildings or work areas until regular parking areas are opened for use.

2.1.6. Support Units. Units required in the support of S&IC Instruction as directed by the S&IC Committee will outline responsibilities for their unit in the Base S&IC Instruction. The responsibilities outlined will only be those essential to support the instruction and not internal day-to-day operations or recall procedures that would better fit in a unit operating instruction.

2.2. Mission. The purpose and objective of this instruction is to establish priorities, responsibilities, and procedures for S&IC on base and in the missile complex.

2.3. Execution. Tasked organizations (**Attachment 2**) will accomplish support as indicated:

2.3.1. Support Group Commander. The 341st Support Group Commander (341 SPTG/CC) is directly responsible for all S&IC activities on the installation.

2.3.2. BCE. The BCE is directly responsible to the 341 SPTG/CC for the satisfactory performance of all snow removal activities on the base, in the missile complex, and for correlating civil engineering (CE) functions with those of other organizations. The BCE will:

2.3.2.1. Establish an Internal Civil Engineer (CE) S&IC Committee to ensure an effective S&IC program is established and work responsibilities are clearly delineated.

2.3.2.2. Appoint a Snow Control Officer (SCO) to coordinate all S&IC activities. The SCO will be the Chief of Operations.

2.3.2.3. Ensure adequate facilities, equipment, materials, and personnel requests (including over-hires) are provided for S&IC Program.

2.3.2.4. Ensure adequate hands-on operator training is completed prior to 1 October.

2.3.2.5. Convene the S&IC Work Committee to discuss immediate action for any serious problems encountered which might arise.

2.3.2.6. Ensure, in conjunction with the 341st Transportation Squadron Commander, a comprehensive summer rehabilitation program for snow removal equipment is established. Status of rebuild, parts on order, and operator maintenance will be briefed at the S&IC Committee meeting and Commander's Update Briefings starting in August.

2.3.2.7. Ensure equipment requiring major rebuild has been identified to Vehicle Maintenance for depot scheduling.

2.3.2.8. Ensure support agreements are reviewed and updated.

2.3.2.9. Establish and physically locate the Snow Control Center (SCC).

2.3.2.10. Prepare the S&IC Instruction.

2.3.2.11. Notify Headquarters Air Force Space Command (HQ AFSPC) by phone when the snow removal equipment in-commission rate or operational capability falls below 80 percent.

2.3.3. The CES Section Commander (341 CES/CCE) is directly responsible to the BCE for:

2.3.3.1. Administration and processing of all civilian personnel matters, the accomplishment of Standard Form 52, Request for Personnel Action, and requests for overtime.

2.3.3.2. Support of training programs for equipment operators and other temporary-hire employees. Obtaining necessary publications and training aids, and assisting as may be required to ensure an aggressive program.

2.3.3.3. Maintenance of statistical information necessary to fund budgets, historical records, and such other pertinent information.

2.3.4. The SCO:

2.3.4.1. Is responsible to the BCE for safety of the snow removal operation. The SCO will monitor all operations to a maximum degree, paying particular attention to Priority Areas, and inspect daily to ensure residue snow banks do not become a hazard.

2.3.4.2. Coordinates with the various civil engineer flights in the performance of their functions.

2.3.4.3. Ensures a close liaison is maintained with the Heavy Equipment Section, 341st Transportation Squadron.

2.3.4.4. Ensures the marking of fire hydrants, manhole covers, water and sewer line curb boxes, refueling pits, etc., which could be damaged by snow removal equipment.

2.3.4.5. Notifies the BCE of deficiencies and new requirements for personnel or equipment.

2.3.4.6. Ensures only properly qualified operators are permitted to operate snow removal equipment.

2.3.4.7. Ensures availability of personnel and equipment.

2.3.4.8. Ensures job assignments are within time limits as required by shift schedules and conditions.

2.3.5. The Superintendent, Heavy Repair Section (341 CES/CEOH):

2.3.5.1. Is responsible to the SCO for the entire snow removal operation, and also to report to AFSPC when vehicle in-commission rate falls below 80 percent.

2.3.5.2. Is responsible to ensure preparations for snow removal operations are completed not later than 1 October. In the event of an early snowfall, the Heavy Repair Superintendent must be prepared to initiate the snow removal program.

2.3.6. The Foreman, Horizontal Construction:

2.3.6.1. Supervises preparation and accomplishment of snow removal program.

2.3.6.2. Ensures all supervisors and operators are well trained on snow removal equipment and methods of operation as outlined in AFR 85-8 by conducting an extensive preseason On-The-Job Training (OJT) program. An operational check of each operator's individual ability must be performed.

2.3.6.3. Notifies the SCO of deficiencies and new requirements for personnel or equipment.

2.3.6.4. Ensures personnel involved in missile site snow removal can authenticate prior to 1 October.

2.3.6.5. Ensures equipment is fully serviced and prepositioned to ensure the start of snow removal operations.

2.3.7. Shift Supervisors:

2.3.7.1. Are responsible to the Foreman of Horizontal Construction Section.

2.3.7.2. Supervise the activities of their crew, ensuring the best utilization of personnel and equipment assigned, and ensure performance of snow removal operations is in accordance with this procedure and other publications and directives.

2.3.7.3. Maintain close liaison with the Heavy Equipment Section, 341st Transportation Squadron, to ensure priority maintenance is performed on snow removal equipment.

2.3.7.4. Affect close contact between the shifts to request priority maintenance on the most urgently needed equipment.

2.3.7.5. Maintain an accurate snow control log.

2.3.7.6. Will notify the SCC immediately of damage to any structures on the airdrome. The SCC will notify Base Operations so they can initiate required repair action.

2.3.7.7. Will carry a shovel in vehicle and remove any chunks of ice or snow dropped by snow removal equipment on portions of the airdrome frequented by aircraft.

2.3.7.8. Ensure all vehicles operating on the runway are equipped with two-way radios.

2.3.7.9. Check the 40th HF flying schedule daily to ensure snow is removed for arriving aircraft and one hour prior to scheduled departing aircraft.

2.3.8. Vehicle Operators:

2.3.8.1. Operate and service S&IC equipment within their responsibility.

2.3.8.2. Ensure they are in possession of a valid operator's license and are briefed on the new flight line driving policy and document training on the AF Form 55.

2.3.8.3. Report any damage to equipment, structures on the airdrome, or malfunctioning of snow removal equipment to the shift supervisor.

2.3.8.4. Advise their replacement, at shift change, of the condition and operation of assigned equipment.

2.3.9. The SCC:

2.3.9.1. Maintains status and location of equipment.

2.3.9.2. Monitors radio for requests of assistance, condition of equipment, and status of operation.

2.3.9.3. Maintains roster of personnel and assigned equipment.

2.3.9.4. Recalls personnel as directed.

2.3.9.5. Coordinates with Base Fuels and the Dining Facility to obtain services required or requested by shift supervisor.

2.3.9.6. Will immediately notify the Base Operations flight data section of damage to any structures on the airdrome.

2.3.9.7. Contacts the Vehicle Maintenance Shop NCO (ext 6335/6336) to obtain authorization for local shop repair.

2.3.9.8. Provides Central Security Control (CSC) with advanced notification prior to flight line snow removal operations being conducted near the aircraft restricted areas.

2.3.10. The 341st Operations Group:

2.3.10.1. Missile Alert Facility (MAF) Facility Managers:

2.3.10.1.1. Will be trained (by CE personnel) in the operation of snow removal equipment.

2.3.10.1.2. Are responsible for operator care and maintenance of snow removal equipment prepositioned on their respective MAFs.

2.3.10.1.3. Will, at a minimum of once a week, drive the unit out of its storage area and allow it to run (approximately 30 minutes) until all systems are at normal operating temperatures.

2.3.10.1.4. Will, prior to operating the equipment (this includes any operator), complete the operator’s inspection guide and trouble report, AF Form 1806.

2.3.10.2. Food Service will ensure, during the months of October through April, additional rations are stocked at MAFs. Two to four additional CE personnel are expected to be prepositioned for snow removal or flood control.

2.3.11. The 341st Transportation Squadron Commander will:

2.3.11.1. Ensure during the off-season, all snow removal equipment will be renovated, repaired, and winterized on a priority basis established through liaison with Civil Engineer. Status will be maintained on servicing schedules, release and positioning data, and final inspection of in-place equipment.

2.3.11.2. Ensure adequate spare parts are on hand to support repair requirements of all snow removal equipment during winter operations.

2.3.11.3. Assign maintenance personnel to be on standby to ensure 24-hour coverage for snow removal equipment repair as needed.

2.3.11.4. Ensure the mobile maintenance vehicles are equipped and manned for servicing (not to include off-base refueling) and repair of unserviceable snow removal equipment.

2.3.11.5. Provide OJT for mechanics on S&IC vehicles. NOTE: This will include familiarization and training for newly assigned personnel who are not familiar with snow removal equipment.

2.3.11.6. Provide 24-hour wrecker service during S&IC operation.

2.3.11.7. Provide daily snow removal equipment serviceability status to SCC from 1 Oct to 1 May.

2.3.12. The Supply Contractor responsibilities include:

2.3.12.1. Timely procurement of requested equipment and supplies in support of S&IC Instruction.

2.3.12.2. Provisions for issuing requested equipment and supplies on a 24-hour, 7-days per week basis.

2.3.12.3. Providing 24-hours per day capability for refueling S&IC equipment during actual snow removal operations.

2.3.12.4. Providing fuel dispensing vehicles for refueling equipment on site when the base dispensing pumps are not in close proximity of the operation.

2.3.12.4.1. The Fuels Control Center (ext. 4321) will arrange refueling of snow removal equipment when requested by the SCC. Snow removal equipment will be given priority over all vehicles awaiting service during snow removal operation.

2.3.12.5. Providing mobile servicing equipment when the Service Station is inoperable.

2.3.13. Weather Flight Commander. The Staff Weather Officer responsibilities include:

2.3.13.1. Notifying the 341st Operations Group Commander, through local command and control system, when weather is observed or forecasted which may require the employment of snow removal forces.

2.3.13.2. Issuing snow accumulation warnings and/or advisories, for Malmstrom Air Force Base and/or the missile complex as soon as possible prior to the time when the accumulation of snow is expected to begin in accordance with MAFBI 15-101, *Weather Support Procedures*.

2.3.13.3. Briefing CE and SCC (ext. 6464), upon request during the period of 1 October through 1 May: the onset time of storm (snowfall); duration; and the approximate depth of snow.

2.3.13.4. Notifying the SCC of any significant change in the forecast through the local command and control system or as specified in the base S&IC Instruction.

2.3.14. Base Contracting. Contracting responsibilities include:

2.3.14.1. Providing contracts for rental of emergency equipment.

2.3.14.2. Providing timely contracting of equipment for attachments or supplies to support the S&IC operations.

2.3.14.3. Procedures for emergency procurement of services for other than normal duty hours.

2.3.15. The 341st Services Squadron Commander. The commander's responsibilities include:

2.3.15.1. Providing box lunches with 2-hour prior notification whenever possible for S&IC personnel whose duty hours or locations preclude them from eating in the dining facilities. Lunches will be picked up at the dining facility.

2.3.15.2. Ensuring the dining facility remains open during other-than-normal feeding hours when such deviation is warranted. CE will process the request through the 341 SPTG/CC at least 1 hour in advance. The request will include the number of personnel requiring service.

2.3.15.3. Ensuring civilian personnel authorized by the 341 SPTG/CC to subsist in the dining facility during the hours when all non-appropriated feeding facilities are closed will be furnished meals on a cash basis only in accordance with AFI 34-401, *Food Service Management.*

2.3.16. Chief of Safety. The Chief of Safety responsibilities include:

2.3.16.1. Reviewing S&IC Instruction to ensure operations are in the best interest of safety.

2.3.16.2. Ensuring base personnel are aware of hazards of snow and ice and precautions that must be taken.

2.3.16.3. Investigating all incidents or accidents involving snow removal equipment.

2.3.17. The 341st Communications Squadron Commander. The Commander's responsibilities include:

2.3.17.1. Providing Land Mobile Radio (LMR) management support for snow removal operations by reviewing requests for LMR equipment according to AFI 33-106, *Managing High Frequency Radios, Land Mobile Radios and the Military-Affiliate Radio System*.

2.3.17.2. Providing for repair of LMRs used for S&IC operations according to pre-established priority repair lists in unit or base directives.

2.3.18. 40th Helicopter Flight Commander. The commander is responsible for transportation and observations to, from, and in the missile field. Depending on mission priority as determined by the OG and LG, 40 HF will transport snow crews to and from the missile field when transportation by highway is not possible.

2.3.18.1. Ensuring pilots flying routine missions in the missile field report any the following observed conditions of launch facilities (LF) to SCC either on Channel 4 of missile net or land line, ext. 6464/6465: snow drifts blocking the access road to an LF gate; snow drifts blocking the gate into an LF; snow drifts blocking access to the A or B plug; snow drifts behind the launcher closure door; or any other observations concerning snow on the site.

2.3.18.2. SCC may request observations of certain LFs that would require deviation from planned flight path without adversely affecting fuel or time line.

2.4. Logistics and Administration:

2.4.1. Over-hire Requirements. If the snowfall is extra heavy and prolonged, onboard resources may be exhausted requiring additional personnel to accomplish S&IC. Over-hires will be placed on an on-call status and will be utilized as required. Over-hire employees must have 1 year experience driving 5 to 7-ton trucks and if possible, 1 or more years experience on earth-moving construction-type equipment. When snow removal is not required, over-hires will perform pavements and grounds duties in line with their job descriptions.

2.4.2. Snow Removal Training and Evaluation:

2.4.2.1. An adequate snow removal training program for all personnel, including temporary hires, will be provided for snow removal operations. Wing missile maintenance will provide new CE equipment operators with an orientation on the layout of LFs to minimize the possibility of damage during snow removal operations. This 341 SW orientation briefing will be requested by the 341 CES/CEO through 341 LSS/LGLOS, when required.

2.4.2.2. Snow removal training and evaluation will be completed by 1 October each year.

2.4.2.3. All Pavements and Construction Equipment personnel possessing valid driver's licenses will be trained and evaluated on all phases and operating procedures of snow removal equipment.

2.4.2.4. All aspects of safety and equipment operation will be stressed throughout the instruction. Special emphasis will be placed on the barrier cables and their locations and on hazardous areas in the missile complex road system.

2.4.2.5. Instructors will be the shift supervisor and senior NCOs of the concerned shops.

2.4.2.6. Personnel will be trained to operate a: Rollover plow; Snow blower; Front-end loader; Airblast sweeper; Dump truck w/plow; Grader; and Bombardier.

2.4.3. Equipment Preparation:

2.4.3.1. Since snow removal equipment must be in operational readiness prior to 15 September, the supervisor of the Horizontal Construction Section must coordinate with the 341st Transportation Squadron, Heavy Equipment Shop, to ensure all depot and motor vehicle repairs are expeditiously completed prior to 15 September. When the snow removal instruction becomes operational, the Heavy Repair superintendent will be responsible for the positioning of the equipment. As equipment is placed in service, it will be thoroughly road-tested, checked for operation, and placed in heated storage, both on base and at MAFs, to be positioned and ready for immediate employment. Loaders will be positioned at MAFs. Sufficient space for servicing and repairs of equipment will also be provided.

2.4.3.2. All snow removal equipment will be operational by 15 September.

2.4.3.3. Equipment will be stored in heated facilities to prevent hydraulic system damage and be available for immediate use.

2.4.3.4. Markers. Prior to 1 October, markers will be installed on all fixtures or structures that may be damaged by, or cause damage to, snow removal equipment in the course of snow removal operations. Precautions will be taken to prevent foreign object damage.

2.4.4. Material/Parts Preparation. CE will stock the following materials/parts as a minimum:

2.4.4.1. Up to 150,000 gallons of liquid de-icer may be required during the snow removal season. It will be ordered in increments of 6,000 gallons.

2.4.4.2. Up to 10,000 pounds of sodium acetate may be required during the snow removal season. A reorder point of 2,400 pounds will be established to ensure adequate supply.

2.4.4.3. Snow-plow blades, cutting edges, and shoes will be on-hand in quantities predetermined by the Horizontal Construction Superintendent, no later than 1 October of each year.

2.4.5. Preparation of Airfield, Roads, and Facilities. Airfield markers will be installed by 1 October on any fixture, facility, or structure that can be damaged or may damage snow removal equipment. The Exterior Electric Shop will be responsible for installing markers to indicate location of airfield lighting systems, communications, manholes, electrical distribution, etc.

2.4.5.1. The Horizontal Construction Section will be responsible for installing markers to indicate culverts, catch basins, and other drainage structures; level shoulders and eliminate obstacles on the airfield not later than 1 November. Prior to snow removal season, manholes and like structures must have grades established to permit snow removal equipment to pass over them, and all potential hazards must be identified and marked prior to 1 November.

2.4.5.2. The Liquid Fuels Maintenance Shop will be responsible for the installation of markers to indicate location of valve boxes, meter pits, etc.

2.4.5.3. Snow Fence will be installed at predetermined locations.

2.4.5.4. Each Zone will be responsible for the installation of markers to indicate location of fire hydrants, manhole covers, water and sewer systems, etc.

2.4.6. SCC is located in Bldg. 407. It will be equipped with two telephone extensions with two instruments, and a Remote Control Unit with transmitter and receiver. It is off limits to all personnel who are not conducting official business. SCC responsibilities are to:

2.4.6.1. Maintain a vehicle board showing registration number, description, nomenclature, location of equipment, and remarks concerning equipment status. Base map and missile complex maps will be mounted and covered with acetate so current status of the base and missile site areas can be accurately maintained.

2.4.6.2. Maintain a crew dispatch board showing the name of team members, radio call sign, trip number, location, time arrived and departed remarks, and missile sites scheduled.

2.4.6.3. Maintain a priority board showing requested missile site snow removal, type of snow removal, priority, time and date snow removal must be completed, and time, date, name and telephone number of requester.

2.4.6.4. Keep all snow removal status boards current at all times.

2.4.6.5. Ensure post-season meetings pertaining to snow removal operations, policies, and procedures are accomplished during the months of May and September.

2.5. Command and Signal. All snow removal equipment operating on the runway will be radio equipped.

Chapter 3

SNOW AND ICE CONTROL OPERATIONS

3.1. Airfield Snow Removal. Snow removal will be given priority over aircraft operations on the runway, when snow conditions would jeopardize the controlled movement area serviceability and cause the installation to be closed to flying. To achieve this, close coordination and cooperation will be maintained between SCC and Helicopter Operations. Alternate access to the controlled movement area, by S&IC equipment and by aircraft, is necessary so that Malmstrom Air Force Base is in operational condition at all times. Successful snow removal depends largely upon the ingenuity and good common sense of the personnel concerned. The controlled movement area is defined as the area enclosed by orange cones.

3.1.1. Snow removal operations will commence on the helicopter parking, taxiways, and helipads with the start of precipitation to achieve a continuous bare pavement.

3.1.2. Entry/Reentry to Controlled Movement Area. Before entering or returning to the movement area, the snow removal supervisor will contact the 40 HF/ODO by radio for clearance onto the controlled movement area for the equipment involved in snow removal operations and will inform 40 HF/ODO if there is intent to deviate from the procedure described.

3.1.3. At the beginning of a snowfall, snow removal equipment will commence operations starting at the hanger doors and work their way out to the taxiways, helipads, and the runway.

3.1.3.1. Every effort will be made to obtain maximum productive time from each operator and piece of equipment. Sufficient personnel and equipment will be employed to ensure that fire lanes are open and the airfield is maintained in an operational status.

3.1.3.2. Runway snow plowing operations will be performed utilizing methods and procedures proven from past experience to be the quickest and most economical. Due to existing wind condition, normally the runway will be plowed one direction to the south and a back-pass made next to the lights into the adjacent field. Snow plowing operations under "no-wind" or "light snow" conditions will be performed by plowing from centerline of the runway to each side.

3.1.4. In the event of an impending emergency operation, or normal landing of aircraft, the 40 HF/ODO will warn snow removal personnel on the controlled movement area by radio. If normal radio communications cannot be established, the 40 HF/ODO will blink the runway lights. The following actions apply:

3.1.4.1. Operators of all snow equipment will clear from the movement area by the nearest hard surface and proceed 200 feet from helipad or slide area.

3.1.4.2. Any snow removal equipment operating on the ramp and ramp taxiway will yield to taxiing aircraft.

3.1.5. Augmentation crews, as required, will report to the SCC with adequate winter clothing, and will be utilized for shoveling snow from runway lights, taxiway lights, etc., as directed by the shift supervisor.

3.1.6. Taxiways, under "no-wind" or "light-snow" conditions, will be plowed from the centerlines of taxiways to each side, with a back-pass, and snow then blown into adjacent field. In strong wind conditions, taxiways will be plowed in one direction from the windward side.

3.1.7. Upon completion of snow removal in the high priority areas, crews will be deployed, as directed by shift supervisor, to lower priority areas. Snow removal operations on streets, parking areas, etc., will be accomplished by truck-mounted plows, sanders, graders, and sweepers, as required.

3.1.8. Safety during snow removal operations is paramount and will not be compromised.

3.1.9. Snow will be moved from airfield lighting by hand, then excess snow around the area will be removed by snow removal equipment.

3.1.10. Snow removal operation will cease when visibility is determined to be unsafe for further operation. This will be determined by the SCO.

3.1.11. Other airfield areas: Snow removal from the following areas is accomplished by the facility occupant or OPR by hand shoveling, small rotary blowers, and small tractor-mounted plows.

3.1.11.1. Areas which cannot be safely cleared by using snow removal equipment designed for airfield use.

3.1.11.2. Navigation Aids (NAVAIDS).

3.2. Snow Removal for Streets, Roads, and Parking Areas:

3.2.1. All primary roads and street intersections will be sanded a distance of 40 feet on each side of each intersection immediately after plowing.

3.2.2. Streets will be de-iced prior to 0645 and 1600 on normal duty days.

3.2.3. Parking lots and housing area streets, other than those allowing the access of key personnel, will be cleared without priority, as man-hours and equipment become available.

3.3. Other Snow Removal. The building custodian, using agency, housing occupant, and/or OPR will be responsible for snow removal from:

3.3.1. Sidewalks, driveways, loading docks, and porches.

3.3.2. Fire hydrants.

3.3.3. Overhead and sliding doors, vertical lifts, and swinging gates.

3.4. Missile Field Snow Removal. The purpose of this section is to specify the procedures, personnel, and equipment necessary for snow removal operations in the missile complex, and to specify procedures and method of operations to meet the additional snow removal requirements for removing snow from behind the launch closure at LFs.

3.4.1. Responsibility. The BCE is responsible for snow removal in the missile alert facilities and LFs when teams cannot gain access to the site with vehicles fully chained, and for notifying the State Highway Department for snow removal requirements on public access roads. Also, BCE is responsible for correlation of the functions of CE with those of other organizations for the purpose of implementing snow removal operations and having the ability for continued 24-hour operation under the requirements of this section. BCE will coordinate schedule with 341SW LOC and ensure LOC is kept informed of snow removal progress in the field.

3.4.2. Propositioning of CE Personnel and Equipment:

3.4.2.1. Propositioned equipment will be the 2,000 TPH snow blowers, one at each of the following MAFs: C-1, F-1, and M-1 and a front-end loader at each MAF.

3.4.2.2. All snow removal support will respond from the support base. All available equipment and personnel will be operationally ready and standing by when not actually engaged in snow removal. Standby time will include time required for equipment maintenance.

3.4.2.3. In the event of a severe winter storm warning, all required equipment and personnel will be propositioned at MAFs nearest to priority snow removal request to await the storm, as determined by the BCE. Caution should be used to keep required personnel on base to relieve crews after 4 days in the field to avoid crew fatigue. When extreme weather conditions exist, crew changeover will be conducted by 6-passenger pickups that are radio equipped, or when possible, crews will ride with the capsule officers who are changing over at the MAFs. This will be coordinated with the appropriate missile squadron beforehand. Crew changes at other times will be made in midday to avoid icy conditions wherever the schedule allows. CE will preposition loaders or bobcats at MAFs.

3.4.2.4. All propositioning of equipment will be completed by 15 October.

3.4.3. Snow Removal on Public Access Roads. All requests for snow removal on public access roads will be called to the Cascade County Sheriff dispatcher, who will contact the appropriate county road department.

3.4.4. Transportation. CE may require additional transportation to make crew changes.

3.4.5. Equipment Maintenance. The Transportation Maintenance Shop will be responsible for equipment that breaks down in the field. It will assume responsibility for repair. The equipment operator will inform Vehicle Dispatch of the location and type of malfunction of the broken equipment.

3.4.6. Communications:

3.4.6.1. Telephone communications will be maintained between Malmstrom AFB and the missile sites.

3.4.6.2. SCC, upon receipt of requests for snow removal from 341 SW LOC, will relay requests to crews at the missile sites.

3.4.6.3. Equipment breakdowns and/or requirements and personnel requirements will be relayed by telephone from missile sites to SCC, ext. 6464.

3.4.6.4. Telephone will be used in emergencies.

3.4.6.5. Snow removal teams will be equipped with radios for the purpose of maintaining contact with SCC and LOC to the maximum extent possible.

3.4.6.6. Equipment operators will ensure shift supervisors for missile complex snow removal and LOC are informed of each arrival and departure of a crew or team at a missile complex. This may be accomplished by Radio-Telephone Patch-SIN Line at Soft Support Building or by radio. Call-ins are necessary to show work progress and/or status to enable supervisors to properly prepare a work assignment schedule.

3.4.7. Predispatching. Predispatches will be completed by the Snow Removal Team Chief and verified by the SCC.

3.4.8. Rations and Quarters:

3.4.8.1. During snow removal operations, Food Service personnel may be required to provide messing facilities at other than normal serving hours. Snow removal teams will provide one-hour advance notification.

3.4.8.2. Box lunches may be required instead of normal messing.

3.4.8.3. Quarters may occasionally be required for two to six individuals. MAFs will be given all the advance notice possible, prior to the arrival of personnel.

3.4.9. Safety. Prior to departure from Malmstrom AFB, each snow removal crew will attend a safety briefing. Existing weather conditions, laws, regulations, instructions, current operation instructions (OI), and good common sense will determine the actions of personnel and the manner in which snow removal equipment is operated.

3.4.10. Tools and Equipment:

3.4.10.1. Sufficient tools and equipment of a predetermined type and number will be located at each MAF snow removal center. These items will be propositioned at the same time as the vehicles.

3.4.10.2. The shift leader will be responsible for the issue of tools to personnel and will account for such tools on AF Form 1297, Temporary Issue Receipt.

3.4.11. Snow Removal Procedures:

3.4.11.1. Snow removal personnel will not accept or perform snow removal duties from any source other than the SCC. Emergency work will be assigned from the SCC.

3.4.11.2. When removing snow within the MAFs and LFs, vehicle operators will take extreme care to avoid damage to the complex fixtures and snow removal equipment.

3.4.11.3. Vehicles and equipment will use the transport-erector (TE) routes at all times.

3.4.11.4. The team chief will, as soon as possible, inform the SCC of any change in status or location of equipment and personnel.

3.4.11.5. All sanding requests will be cleared through the SCC.

3.4.11.6. Ice removal chemicals will not be used, except in conjunction with sand, unless approved by the BCE.

3.4.11.7. Facility Managers located at the MAFs will be responsible for moving or having moved those vehicles which interfere with snow removal at the MAFs.

3.4.11.8. The removal of snow from the air intake ducts and the access ladder pits will be the responsibility of the missile security forces.

3.4.11.9. Extreme care will be taken to prevent piling of snow on any part of the Soft Support Building, drainage ditches, or security antenna field.

3.4.11.10. Security police personnel will monitor snow depth on request to support the daily Missile Maintenance Schedule.

3.4.12. Snow Removal on Public Access Roads:

3.4.12.1. All snow removal will be performed by the appropriate county or state.

3.4.12.2. SCC will order all work. CE will furnish the Cascade County Sheriff's dispatcher with a list of personnel authorized to request work. During normal duty hours, this will be limited to two or three persons.

3.4.12.3. SCC will call requests to the Cascade County Sheriff dispatcher.

3.4.12.4. The counties will plow access routes to all MAFs without specific orders. Roads to LFs will be opened only on request, except that the counties will be permitted to open roads to sites on its own judgment in unusual cases, e.g., large accumulation of snow which may later freeze and thus become extremely difficult to remove.

3.4.12.5. State and county plows on public highways will pass MAF entrances, leaving berms which block the entrance. If access is subsequently required, the CE plows may clear the berm.

3.4.13. SCC Responsibilities:

3.4.13.1. During the snow season, coordinate daily with 341 LSS/LGLOS to determine which LFs need to be checked for snow removal and what priority of snow removal is required.

3.4.13.2. During the snow season, coordinate daily with missile security to determine which LFs they may have declared RC2. RC2 sites have lowest priority unless included in the missile maintenance schedule.

3.4.13.3. Keep track of all reported snow conditions at the LFs.

3.4.14. Snow Removal Operations on Missile Sites:

3.4.14.1. The SCC, upon notification from Maintenance Plans and Scheduling or Job Control, will dispatch a snow removal team to the site to remove snow when required. (If the snow must be removed from behind the launcher closure door, CE personnel will remove the bulk of the snow with the front-end loader, using extreme caution to prevent damage to gear rack and tracks. The area will be cleared six inches wider than the launcher closure and at least to the end of the gear rack and tracks. The balance of snow in the vicinity of the closure door will be removed, as required, by missile maintenance personnel responsible for operation of the closure door.) On security improved launch control system sites, CE personnel will remove snow west (east side of 564th) of the launcher pylons using a plow or front-end loader, removing enough snow to allow an PT Van to back into the area so it can be pulled forward over the launcher closure. When removing snow on top of launcher closer door, use caution to clear lifeline attach point located in the middle of launcher closure door. The following is the area snow must be removed from; also see **Chapter 4**.

3.4.14.2. Area A. Entire top side and behind launch closure door (see **Attachment 3**, Wing 1 LF Area A and **Attachment 6**, 564 MS LF Area A).

3.4.14.3. Area B. Entire top side (see **Attachment 3**, Wing 1 LF Area B and **Attachment 7**, 564 MS LF Area B).

3.4.14.4. Area C. Access to support building and turnaround area (see **Attachment 5**, Wing 1 LF Area C and **Attachment 8**, 564 MS LF Area C).

3.4.14.5. Area D. MAFs.

3.4.14.6. The Snow Controller will call the necessary personnel required to perform snow removal duties for maintenance and will schedule personnel and equipment in the sequence in which sites will be opened.

3.4.14.7. The NCO or Snow Controller on duty in the SCC will coordinate with 341 SW LOC the priorities of sites requiring cleaning.

3.4.14.8. Missile security forces will check LFs and access roads to determine snow depth and conditions when requested and obtain the appropriate command authority for current road conditions. Missile Security Control (MSC) will, upon request and after obtaining the appropriate command authority to travel in the complex, dispatch units to conduct a check of the areas of concern and report their findings to CE Snow Controller through MSC. Teams will visually inspect and provide an accurate status report of access roads, vehicle accessibility to launcher closures, support buildings, and depth of snow behind the launcher closures (from the door to the end of the center rail).

3.4.15. Transportation Squadron:

3.4.15.1. Vehicle requirements beyond the available assets of CE will be requested from the Transportation Squadron. Radio equipped, 6-passenger, 4x4 vehicles are the primary vehicle type required; however, suitable substitute vehicles may be provided should the primary vehicle not be readily available.

3.4.15.2. The Transportation Squadron may utilize vehicles from other lower priority units to meet this requirement.

3.4.15.3. Horizontal Construction Section may have a requirement for seven vehicles of this type.

3.4.15.4. These vehicles will be furnished on an "as needed" / "when needed" basis and will be returned to the Transportation Squadron when no longer required.

3.4.16. Snow fence will be installed by Horizontal Construction at predetermined locations as designated by the Missile Engineering Flight.

3.4.17. Missile Dispatch Section. The CE Missile Scheduler will attend the daily scheduling meeting at 341 LSS/MXS to ascertain sites to be cleared and priorities. The priority areas will be updated as required by 341 SW LOC. If there is no scheduling meeting, call 341 SW Scheduling at ext 7027.

3.4.18. 341 SW Logistics:

3.4.18.1. Will ensure vehicles are fully chained to ensure access to sites before they request snow removal. Snow depth of six inches or less will not be removed by CE.

3.4.18.2. Remove snow by hand or with small blowers around security gate, cattle gates, launcher closure door, personnel access hatch, etc., after equipment plowing by CE or when snow depth is less than six inches.

3.4.18.3. Prevent all vehicles from operating in drainage ditches or off stabilized surfaces.

Chapter 4

PRIORITIES

4.1. Priority I:

4.1.1. 1,000 feet of Primary runway from taxiway Romeo running north and the IFR helo pad.

4.1.2. Taxiway Romeo.

4.1.3. Ramp area south of the 3-bay hangar to include area in front of hangar door and all six landing pads, and north landing pad

4.1.4. Goddard Ave. from front gate to 70th ST. east on 70th to Bldg 1440.

4.1.5. Ramp for Bldg. 170. Convoy route to US 87 including access road to Bldg. 1887 (dog kennels) and Bldg. 1890.

4.1.6. East side of fire department to parallel taxiway and taxiway to helicopter parking area.

4.1.7. Access road to missile handling from missile loading pad to Bldg. 1867

4.1.8. WSA interior roads.

4.1.9. Bldg. 500 parking lot prior to 0600

4.1.10. Access to Bldg. 769

4.1.11. Access to Bldg. 349 (Fire Dept).

4.1.12. Access from convoy route to missile handling area.

4.1.13. GMV parking lot between Bldg. 3080, 3081, 1439, and 1440.

4.2. Priority II:

4.2.1. Refueling vehicle parking and road to ramp, behind Bldg. 448.

4.2.2. Access to and around Bldg. 320, POL parking facility.

4.2.3. Bldg. 1480, fuel hydrants, and access road to mass parking area.

4.2.4. Bldg. 295 Parking lot - Law Enforcement desk.

4.2.5. Bldg. 1480 and access road to mass aircraft parking area; access to jet fuel fill stand, Bldg 337.

4.2.6. Access to cryogenic storage facility, Bldg. 44200.

4.2.7. Goddard Ave from main gate to 80th St N, including front of Bldg. 770 & 910.

4.2.8. Aspen Circle to 72nd St, 72nd St from Aspen to Flightline Drive, Flightline Dr, to Bldg. 500. Include Bldg. 295 and Bldg. 300 access.

4.2.9. Access to military service station, Bldg. 1091.

4.2.10. Perimeter road from WSA to CATMS

4.3. Priority III:

4.3.1. Customer parking lot, Bldg. 2040 - Clinic.

4.3.2. Perimeter Road from Commercial Gate to DRMO.

4.3.3. Perimeter Road from Bldg. 3063 to Goddard.

4.3.4. First Ave N from Goddard to 72nd St.

4.3.5. Parking lot Bldg. 330.

4.3.6. Parking lots and Bldg. 1439, 1450, 1460, 1464, 1467, 4000, and 1469.

4.3.7. Access to Bldg. 219.

4.3.8. Parking lot Bldg. 800, 870, scales.

4.3.9. Access to vehicle maintenance shops.

4.3.10. Access to CE shops.

4.3.11. Access to Bldg. 400/410 to include loading docks - Base Supply.

4.3.12. Access roads to Bldgs 1700, 1705, 1708, and 1709.

4.3.13. Access to Bldg. 610 - OSI.

4.3.14. Parking lot Bldg. 300.

4.3.15. Driveway around Bldg. 250.

4.3.16. Access to Bldg. 1408, 1409, 1410, and 1411 (electrical vaults) and parking areas.

4.3.17. Access to Bldg. 1448 and parking area.

4.3.18. Parking lot Bldg. 1075 - Dining Facility.

4.3.19. Parking lot Bldg. 1084 - 341 CS/C-E Logistics Division.

4.3.20. Proof load facility apron and access road to (T-9) trainer (higher priority if requested).

4.3.21. Parking lot Bldg. 1702.

4.3.22. Parking lot Bldg. 145 - Contracting/Information Processing Center.

4.3.23. Parking lot Bldg. 165.

4.3.24. POV parking lots Bldg. 400 and 410 - Base Supply.

4.3.25. Parking lot Bldg. 2040 - Clinic Staff Parking.

4.3.26. Parking lot Bldg. 2040 - Dental.

4.3.27. Parking lot Bldg. 1145 - Wellness Center.

4.3.28. Parking lot Bldg. 1010 - Gym.

4.3.29. Parking lot Bldg. 1320 - Commissary.

4.3.30. Parking lot Bldg. 1150 - BX.

4.3.31. Parking lot Bldg. 1191 - MPF.

4.3.32. Parking lot Bldg. 1600 - Club Malmstrom.

4.3.33. Access to Bldg. 1240 - Education Complex.

4.3.34. Parking lot Bldg. 581 - PME.

4.3.35. Parking lot Bldg. 529 - Housing Maintenance.

4.3.36. Dormitory parking lots.

4.3.37. Housing area streets.

4.3.38. Access to the Riding Stables.

4.3.39. Museum parking lot.

4.3.40. All remaining parking lots.

4.4. NOTE: In the event that a flying mission returns to Malmstrom, and the airfield fully reopens, all priorities changed after the 20 Sep 96 preseason S&IC will revert back to those outlined in MAFBI 32-1001 dated 26 Feb 96. Any other proposed changes will be addressed at an appropriate snow committee meeting.

Chapter 5

POST SEASON REQUIREMENTS

5.1. General. Preparation for the next snow removal season starts at the end of the present season. The logs documenting the problems/successes must be reviewed and eliminated or incorporated into the revision of the S&IC Instruction.

5.2. Equipment. The condition of equipment and the base's capability to effectively perform its mission depends upon the inspection and maintenance performed. It must be thoroughly inspected, repaired, properly stored, and readily available for use in advance of each winter's operation.

5.2.1. Snow removal equipment. All snow removal equipment will be thoroughly inspected at the end of the snow season by CE personnel. Prior to the inspection, equipment must be cleaned to ensure that bare wires, cracked windows or lenses, worn brakes, cracked or damaged frames, chutes, differential and gear cases, final drives, etc., oil or hydraulic leaks, worn belts or pulleys, and worn or cut tires are discovered.

5.2.1.1. Items to be repaired later as operator maintenance will be annotated on a General Purpose Form and filed with the Superintendent of Heavy Repair.

5.2.1.2. Equipment will be processed through Vehicle Maintenance by 15 May.

5.2.2. Summer Rebuild Program. A formal program will be established by the Vehicle Maintenance Officer which will ensure seasonal equipment will be fully serviceable and ready for use by 15 September of each year. Local maintenance operating instruction will be prepared containing specific details of the program.

5.2.3. Snow Removal equipment will be returned to CE after deferred work orders have been written. A schedule for repairs will be established by Vehicle Maintenance.

5.2.3.1. A comprehensive operator maintenance program will be established by the Heavy Repair Superintendent and all repairs must be accomplished. Vehicles not scheduled for repainting will receive appearance repairs and touch-up in accordance with T.0. 36-1-3. Supervisor on all equipment from the summer rehabilitation program and operator maintenance must ensure adequate and proper maintenance and repairs have been accomplished.

5.2.3.2. Status of equipment will be briefed at Commander's Update Briefings during the months of August and September.

5.2.4. Vehicles designed exclusively for S&IC should not be used during the off season for the accomplishment of other work.

5.3. Airfield, Road Surfaces, and Facilities. Immediately after the winter operation, action must be taken to:

5.3.1. Inspect airfield and road surfaces.

5.3.2. Remove and store temporary snow fencing in the spring to reduce loss from weathering, fire, and deterioration. Posts will be removed with pullers cleaned, and straightened. Discard badly damaged fencing. The remaining fencing should be repaired, cleaned, and rolled before storing. Store fence rolls in a storage yard or near their winter location. Bind rolls together with wire and place them

where they will not interfere with vision or maintenance operations or be damaged by grass fires. Review records of all snow fence locations and determine plan for the following winter.

5.3.3. Remove markers.

THOMAS F. DEPPE, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES, AND SUPPORTING INFORMATION

Abbreviations and Acronyms

AFI—Air Force Instruction

AFPD—Air Force Policy Directive

ARG—Air Refueling Group

BCE—Base Civil Engineer

CCE—Chief, Administrative Flight

CE—Civil Engineer

CSC—Central Security Control

EWO—Emergency War Order

FM—Facility Manager

GMV—Government Motor Vehicle

IFR—Instrument Flight Rules

LF—Launch Facility

LGTM—Logistic Ground Transportation Maintenance

LMR—Land Mobile Radio

LOC—Logistics Operation Center

MAF—Missile Alert Facility

MPF—Military Personnel Facility

MS—Missile Squadron

MSC—Missile Security Control

NAVAIDS—Navigation Aids

OJT—On-The-Job Training

OPSEC—Operations Security

PME—Professional Military Education

POL—Petroleum, Oils, and Lubricants

POV—Privately Owned Vehicle

RCR—Runway Condition Reading

SCC—Snow Control Center

SCO—Snow Control Officer

S&IC—Snow and Ice Control

SPTG—Support Group

TE—Transport Erector

VD—Vehicle Dispatch

WSA—Weapons Storage Area

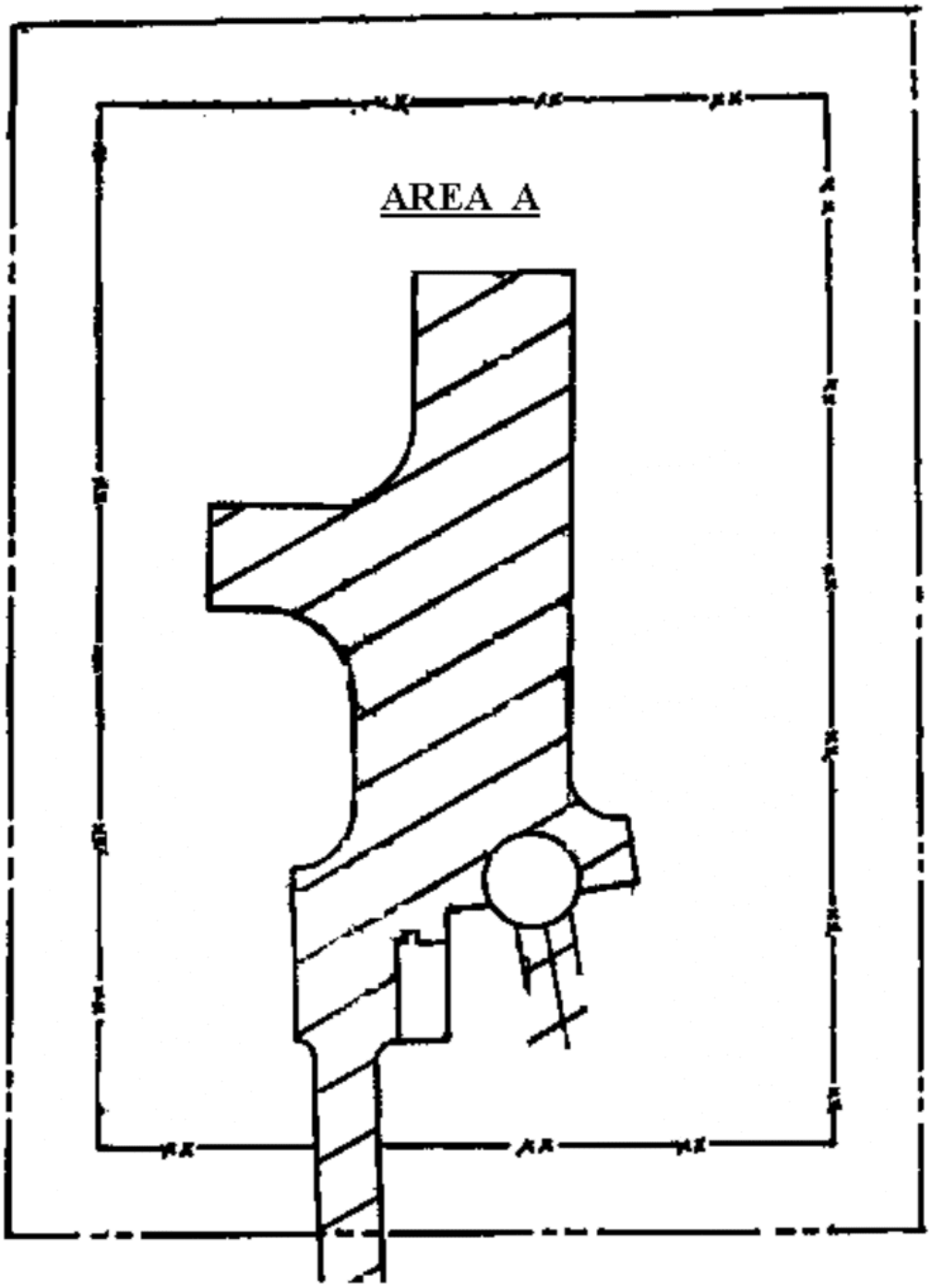
Attachment 2

TASKED ORGANIZATIONS

	OFFICE
341st Support Group	CC
341st Civil Engineer Squadron	CE
341st Security Police Squadron	CC
341st Services Squadron	CC
341st Communications Squadron	CC
341st Operations Group	CC
341st Operations Support Squadron	CC/OSW
40th Helicopter Flight	CC/ODO
341st Logistics Group	CC
341st Transportation Squadron	CC
341st Contracting Squadron	CC
341st Maintenance Squadron	LGMS
341st Supply Squadron	CC
341st Space Wing	SE

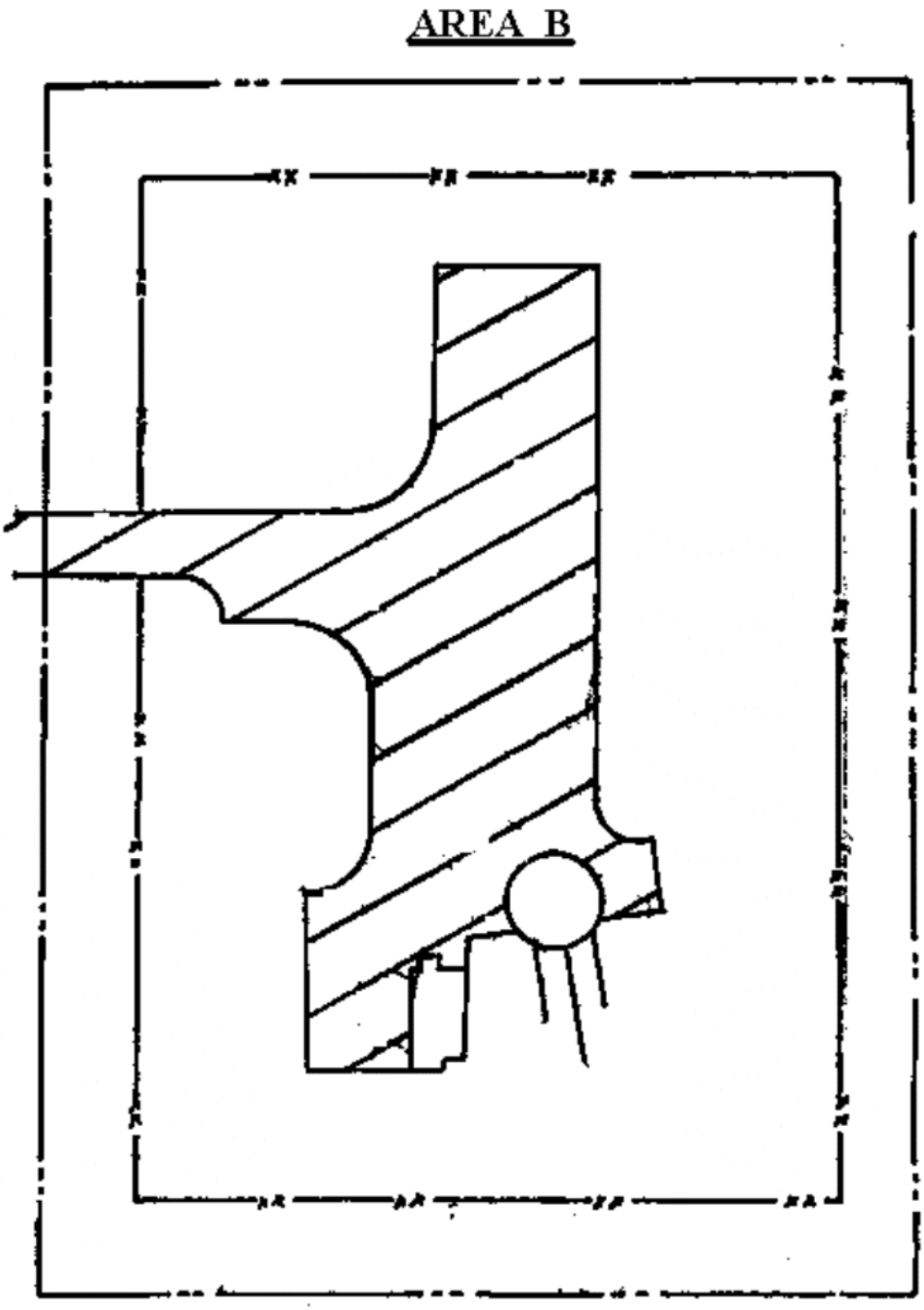
Attachment 3

WING 1 LF AREA A



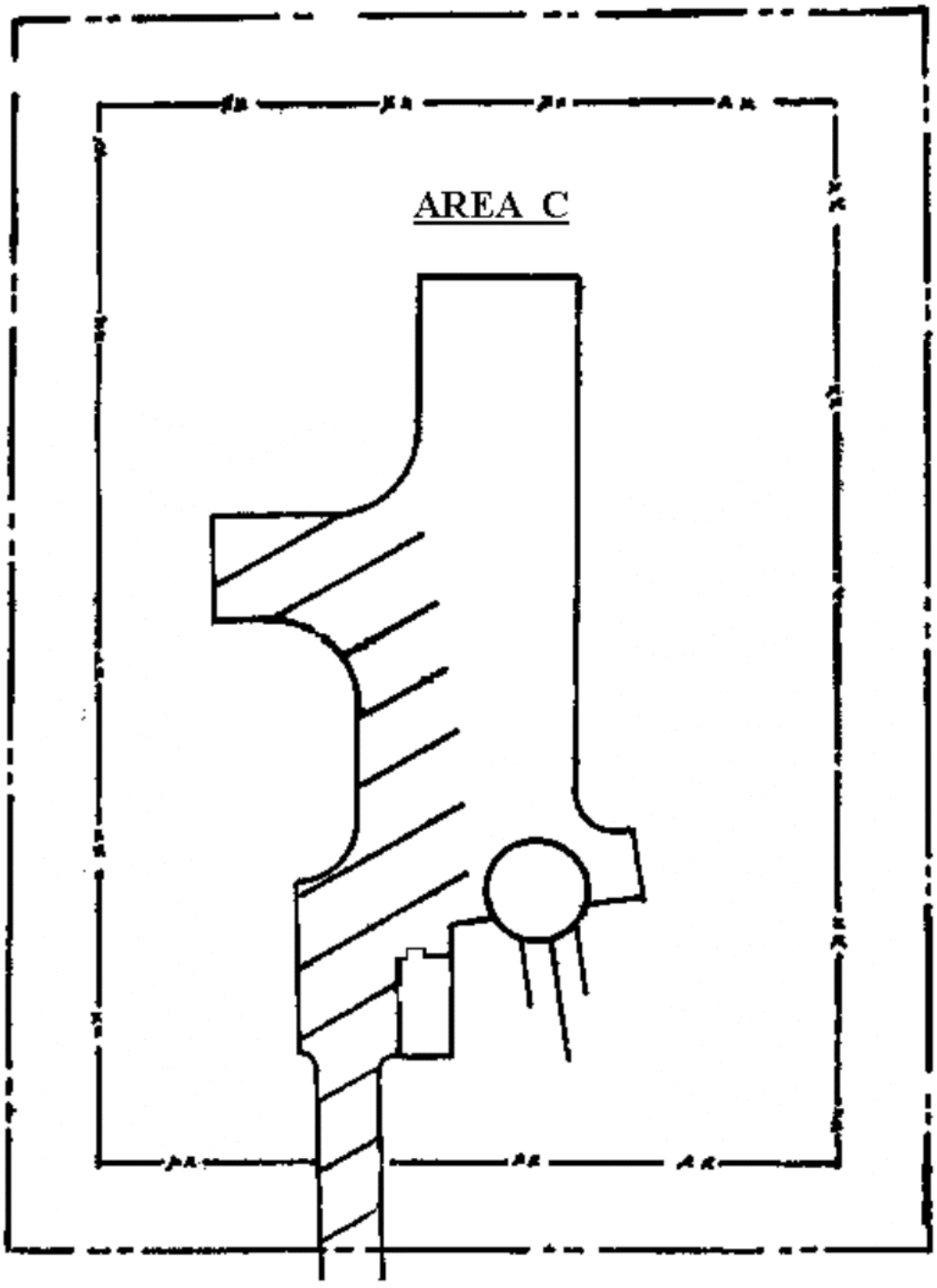
Attachment 4

WING 1 LF AREA B



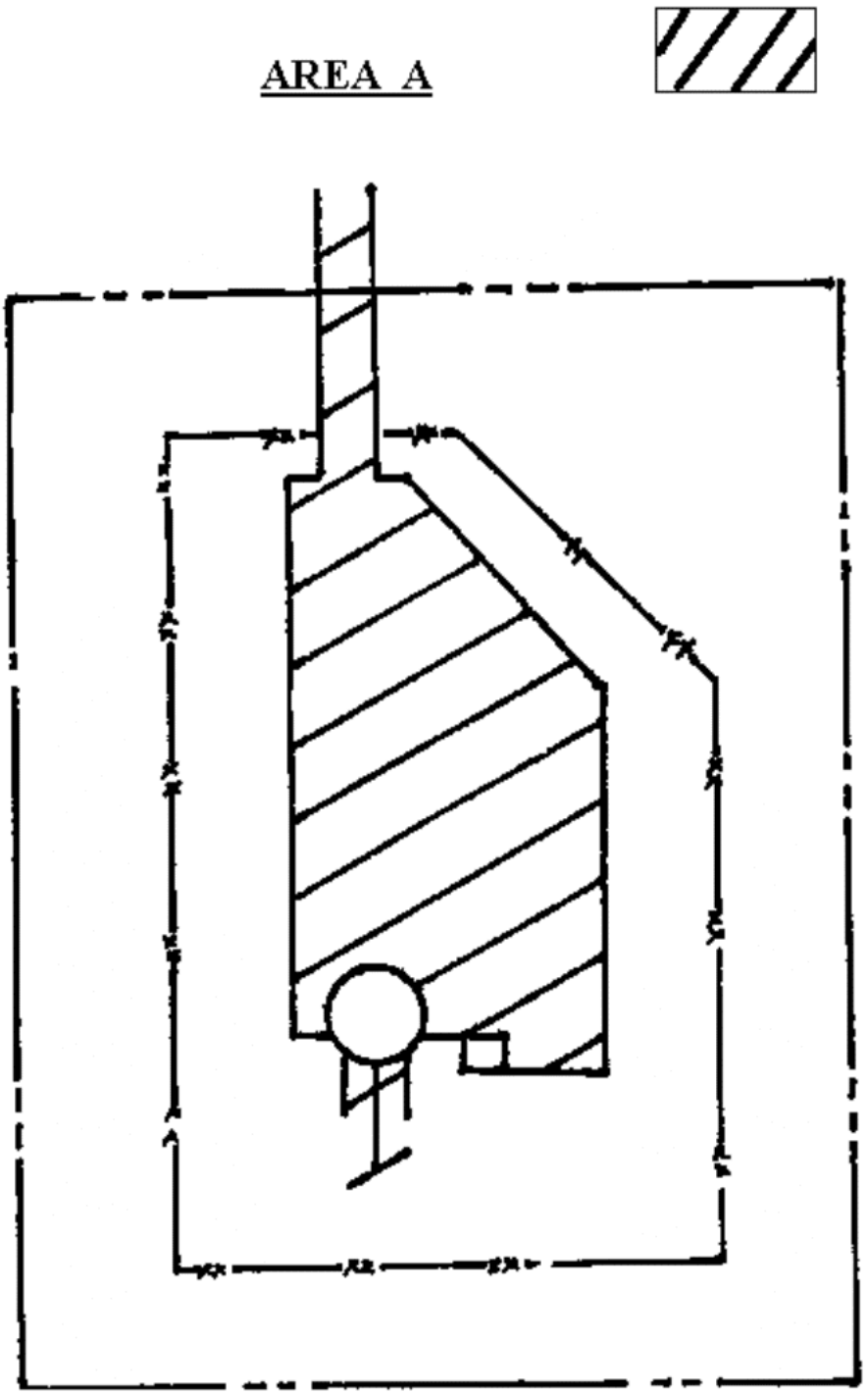
Attachment 5

WING 1 LF AREA C



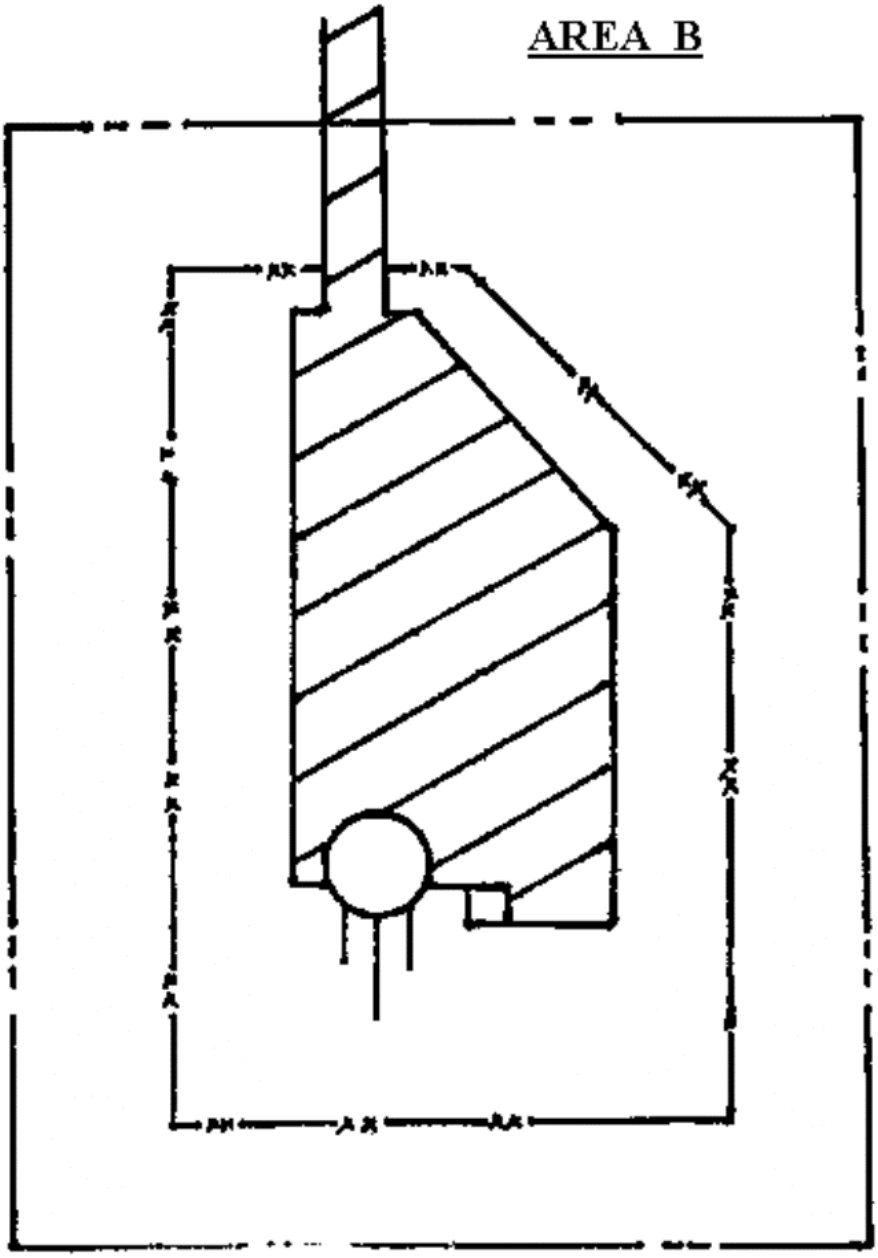
Attachment 6

564 MS LF AREA A



Attachment 7

564 MS LF AREA B



Attachment 8

564 MS LF AREA C